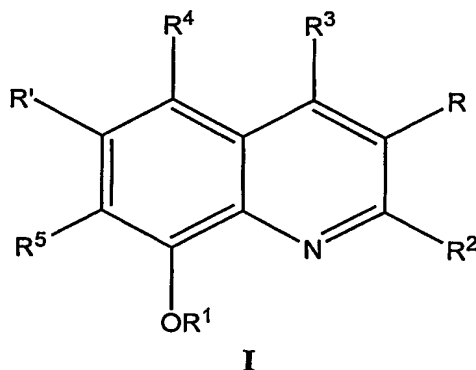


## CLAIMS

1. A method for the prophylaxis and/or treatment of a condition or disorder associated with or exacerbated by oxidative stress and with symptoms including cognitive impairment or memory loss in a subject, said method comprising administering to said subject an effective amount of an agent which reduces the levels of reactive oxygen species.
2. The method of Claim 1, wherein the condition or disorder is a neurological condition or disorder.
3. The method of Claim 1 or 2, wherein said agent is a metal binding agent.
4. The method of Claim 3, wherein the agent modulates the level of plasma zinc and/or copper.
5. The method of Claim 3, wherein said metal binding agent is a 8-hydroxyquinolone or clioquinol (CQ) or a derivative, homologue, analogue, chemical equivalent or mimetic thereof.
6. The method of Claim 5, wherein the CQ is of the Formula I:



in which:

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$R^1$  is H, optionally substituted alkyl, optionally substituted alkenyl, optionally substituted acyl, optionally substituted aryl, optionally substituted heterocyclyl, an antioxidant or a targeting moiety;

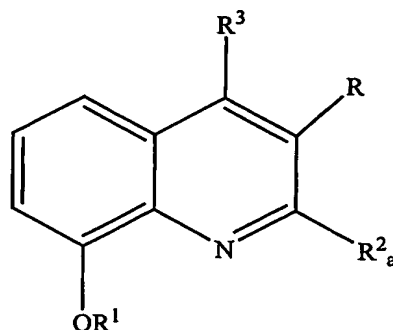
$R^2$  is H; optionally substituted alkyl; optionally substituted alkenyl; optionally substituted aryl; optionally substituted heterocyclyl; optionally substituted alkoxy; an antioxidant; a targeting moiety;  $COR^6$  or  $CSR^6$  in which  $R^6$  is H, optionally substituted alkyl, optionally substituted alkenyl, hydroxy, optionally substituted aryl, optionally substituted heterocyclyl, an antioxidant, a targeting moiety,  $OR^7$ ,  $SR^7$  or  $NR^7R^8$  in which  $R^7$  and  $R^8$  are either the same or different and selected from H, optionally substituted alkyl, optionally substituted alkenyl, optionally substituted aryl or optionally substituted heterocyclyl;  $CN$ ;  $CH_2NR^9R^{10}$ ,  $HCNOR^9$  or  $HCNNR^9R^{10}$  in which  $R^9$  and  $R^{10}$  are either the same or different and selected from H, optionally substituted alkyl, optionally substituted alkenyl, optionally substituted aryl or optionally substituted heterocyclyl;  $OR^{11}$ ,  $SR^{11}$  or  $NR^{11}R^{12}$  in which  $R^{11}$  and  $R^{12}$  are either the same or different and selected from H, optionally substituted alkyl, optionally substituted alkenyl, optionally substituted aryl or optionally substituted heterocyclyl or together form optionally substituted heterocyclyl; or  $SO_2NR^{13}R^{14}$  in which  $R^{13}$  and  $R^{14}$  are either the same or different and selected from H, optionally substituted alkyl, optionally substituted alkenyl, optionally substituted aryl or optionally substituted heterocyclyl; and

$R^3$ ,  $R^4$ ,  $R^5$ ,  $R$  and  $R'$  are either the same or different and selected from H, optionally substituted alkyl, optionally substituted alkenyl optionally substituted alkoxy, optionally substituted acyl, hydroxy, alkylamino, alkylthio, alkylsulphonyl, alkylsulphinyl, halo,  $SO_3H$ , amine, optionally substituted aryl, optionally substituted heterocyclyl, an antioxidant or a targeting moiety,

with the proviso that when  $R^1$  to  $R^3$ ,  $R$  and  $R'$  are H, then  $R^4$  is not Cl and  $R^5$  is not I.

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7. The method of Claim 5, wherein the CQ is of the Formula Ia:



in which:

$R^1$  is H, optionally substituted alkyl, optionally substituted alkenyl, optionally substituted acyl, optionally substituted aryl, optionally substituted heterocyclyl, an antioxidant or a targeting moiety;

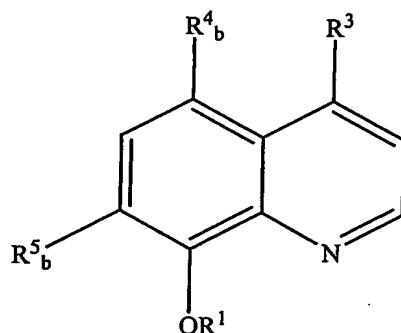
$R^3$  and R are either the same or different and selected from H, optionally substituted alkyl, optionally substituted alkenyl optionally substituted alkoxy, optionally substituted acyl, hydroxy, alkylamino, alkylthio, alkylsulphonyl, alkylsulphinyl, halo,  $SO_3H$ , amine, optionally substituted aryl, optionally substituted heterocyclyl, an antioxidant or a targeting moiety; and

$R^{2a}$  is H; optionally substituted  $C_{1-6}$  alkyl; optionally substituted  $C_{1-6}$  alkenyl; optionally substituted aryl; optionally substituted heterocyclyl; an antioxidant; a targeting moiety;  $COR^{6a}$  or  $CSR^{6a}$  in which  $R^{6a}$  is H, optionally substituted  $C_{1-6}$  alkyl, optionally substituted  $C_{2-6}$  alkenyl, hydroxy, optionally substituted aryl, optionally substituted heterocyclyl or  $OR^{7a}$ ,  $SR^{7a}$  or  $NR^{7a}R^{8a}$  in which  $R^{7a}$  and  $R^{8a}$  are either the same or different and selected from H, optionally substituted  $C_{1-6}$  alkyl, optionally substituted  $C_{2-6}$  alkenyl, optionally substituted aryl or optionally substituted heterocyclyl; CN;  $CH_2NR^9aR^{10a}$ ,  $HCNOR^9a$  or  $HCNNR^9aR^{10}$  in which  $R^9a$  and  $R^{10a}$  are either the same or different and selected from H, optionally substituted  $C_{1-6}$  alkyl, optionally substituted  $C_{2-6}$

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alkenyl, optionally substituted aryl or optionally substituted heterocyclyl;  $\text{OR}^{11}\text{a}$ ,  $\text{SR}^{11}\text{a}$  or  $\text{NR}^{11}\text{aR}^{12}\text{a}$  in which  $\text{R}^{11}\text{a}$  and  $\text{R}^{12}\text{a}$  are either the same or different and selected from H, optionally substituted  $\text{C}_{1-6}$  alkyl, optionally substituted  $\text{C}_{2-6}$  alkenyl, optionally substituted aryl or optionally substituted heterocyclyl or together form optionally substituted heterocyclyl; or  $\text{SO}_2\text{NR}^{13}\text{aR}^{14}\text{a}$  in which  $\text{R}^{13}\text{a}$  and  $\text{R}^{14}\text{a}$  are either the same or different and selected from H or optionally substituted  $\text{C}_{1-6}$  alkyl, optionally substituted  $\text{C}_{2-6}$  alkenyl, optionally substituted aryl or optionally substituted heterocyclyl.

8. The method of Claim 5, wherein the CQ is of the Formula Ib:



Ib

in which:

$\text{R}^1$  is H, optionally substituted alkyl, optionally substituted alkenyl, optionally substituted acyl, optionally substituted aryl, optionally substituted heterocyclyl, an antioxidant or a targeting moiety;

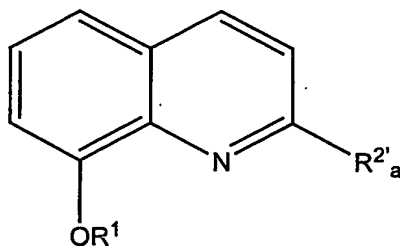
$\text{R}^3$  is either the same or different and selected from H, optionally substituted alkyl, optionally substituted alkenyl optionally substituted alkoxy, optionally substituted acyl, hydroxy, alkylamino, alkylthio, alkylsulphonyl, alkylsulphinyl, halo,  $\text{SO}_3\text{H}$ , amine, optionally substituted aryl, optionally substituted heterocyclyl, an anti-oxidant or a targeting moiety; and

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$R^{4b}$  and  $R^{5b}$  are either the same or different and selected from H; optionally substituted  $C_{1-6}$  alkyl; optionally substituted  $C^{2-6}$  alkenyl; halo; an anti-oxidant; a targeting moiety,  $SO_3H$ ;  $SO_2NR^{13a}R^{14a}$  in which  $R^{13a}$  and  $R^{14a}$  are as defined in Formula Ia above; or  $OR^{15b}$ ,  $SR^{15b}$  or  $NR^{15b}R^{16b}$  in which  $R^{15b}$  and  $R^{16b}$  are either the same or different and selected from H, optionally substituted  $C_{1-6}$  alkyl, optionally substituted  $C_{2-6}$  alkenyl, optionally substituted  $C_{1-6}$  acyl, optionally substituted aryl or optionally substituted heterocyclyl,

with the proviso that when  $R^1$  and  $R^3$  are H, then  $R^{4b}$  is not Cl and  $R^{5b}$  is not I.

9. The method of Claim 7, wherein the Ia is of the Formula of IIa:



IIa

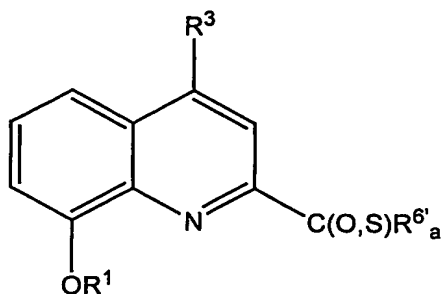
in which:

$R^1$  is H, optionally substituted alkyl, optionally substituted alkenyl, optionally substituted acyl, optionally substituted aryl, optionally substituted heterocyclyl, an antioxidant or a targeting moiety; and

$R^{2'a}$  is optionally substituted  $C_{1-6}$  alkyl, optionally substituted  $C_{2-6}$  alkenyl, optionally substituted aryl or optionally substituted heterocyclyl.

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10. The method of Claim 7, wherein the Ia is of the Formula of IIIa:



IIIa

in which:

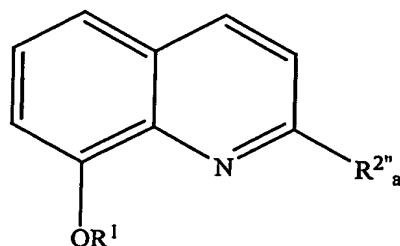
R¹ is H, optionally substituted alkyl, optionally substituted alkenyl, optionally substituted acyl, optionally substituted aryl, optionally substituted heterocyclyl, an antioxidant or a targeting moiety;

R³ is either the same or different and selected from H, optionally substituted alkyl, optionally substituted alkenyl optionally substituted alkoxy, optionally substituted acyl, hydroxy, alkylamino, alkylthio, alkylsulphonyl, alkylsulphinyl, halo, SO₃H, amine, optionally substituted aryl, optionally substituted heterocyclyl, an anti-oxidant or a targeting moiety; and

R⁶ᵃ is optionally substituted C₁-₆ alkyl, optionally substituted C₂-₆ alkenyl, hydroxy, OR⁷ᵃ, SR⁷ᵃ, N₂R⁷ᵃR⁸ᵃ or NR⁷ᵃR⁸ᵃ in which R⁷ᵃ and R⁸ᵃ are either the same or different and selected from H, optionally substituted C₁-₆ alkyl, optionally substituted aryl or optionally substituted heterocyclyl.

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11. The method of Claim 5, wherein the CQ is of the Formula IVa;



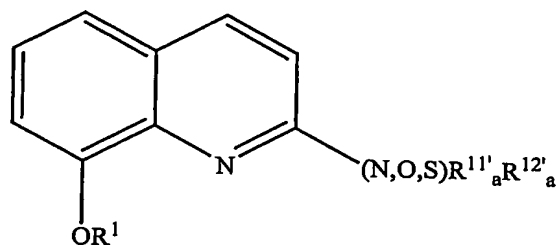
IVa

in which:

R¹ is H, optionally substituted alkyl, optionally substituted alkenyl, optionally substituted acyl, optionally substituted aryl, optionally substituted heterocyclyl, an antioxidant or a targeting moiety; and

R²ᵃ is CN; CH₂NR⁹ᵃR¹⁰ᵃ, HCNOR⁹ᵃ or HCNNR⁹ᵃR¹⁰ᵃ in which R⁹ᵃ and R¹⁰ᵃ are either the same or different and selected from H, optionally substituted C₁-₆ alkyl, optionally substituted alkenyl, optionally substituted aryl or optionally substituted heterocyclyl.

12. The method of Claim 5, wherein the CQ is of the Formula Va;



Va

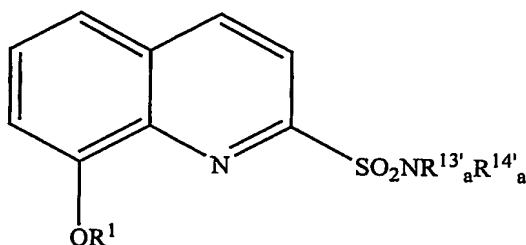
in which:

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$R^1$  is H, optionally substituted alkyl, optionally substituted alkenyl, optionally substituted acyl, optionally substituted aryl, optionally substituted heterocyclyl, an antioxidant or a targeting moiety; and

$R^{11a'}$  and  $R^{12a'}$  are either the same or different and selected from H, optionally substituted  $C_{1-6}$  alkyl, optionally substituted  $C_{2-6}$  alkenyl, optionally substituted aryl and optionally substituted heterocyclyl or together form optionally substituted heterocyclyl.

13. The method of Claim 5, wherein the CQ is of the Formula VIa;



VIa

in which:

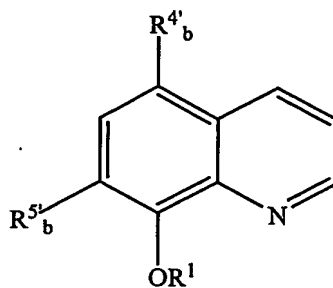
$R^1$  is H, optionally substituted alkyl, optionally substituted alkenyl, optionally substituted acyl, optionally substituted aryl, optionally substituted heterocyclyl, an antioxidant or a targeting moiety; and

$R^{13a'}$  and  $R^{14a'}$  are either the same or different and selected from H, optionally substituted  $C_{1-6}$  alkyl, optionally substituted  $C_{2-6}$  alkenyl, optionally substituted aryl or optionally substituted heterocyclyl.



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14. The method of Claim 8, wherein the Ib is of the Formula of IIb;



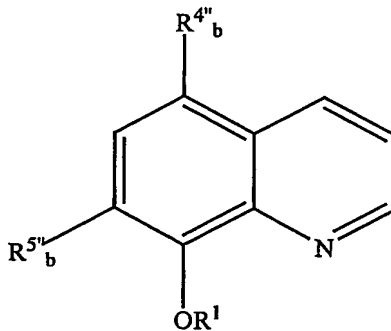
IIb

in which:

$R^1$  is H, optionally substituted alkyl, optionally substituted alkenyl, optionally substituted acyl, optionally substituted aryl, optionally substituted heterocyclyl, an antioxidant or a targeting moiety; and

$R^{4'b'}$  and  $R^{5'a'}$  are either the same or different and selected from halo,  $C_{1-6}$  alkyl,  $C_{2-6}$  alkenyl, amine,  $SO_3H$ , optionally substituted aryl or optionally substituted heterocyclyl.

15. The method of Claim 8, wherein the Ib is of the Formula of IIIb;



IIIb

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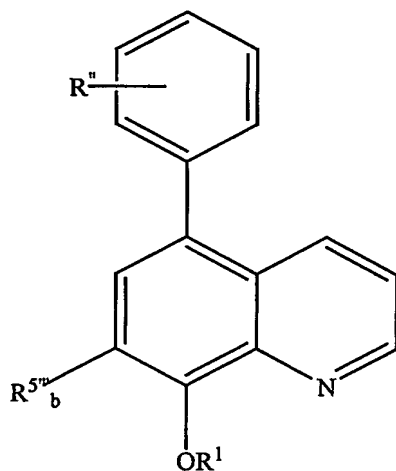
in which

$R^1$  is H, optionally substituted alkyl, optionally substituted alkenyl, optionally substituted acyl, optionally substituted aryl, optionally substituted heterocyclyl, an antioxidant or a targeting moiety;

$R^{4b''}$  is H or halo; and

$R^{5b''}$  is optionally substituted aryl or optionally substituted heterocyclyl.

16. The method of Claim 5, wherein the CQ is of the Formula IVb;



IVb

in which:

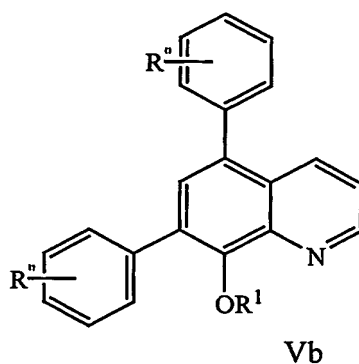
$R^1$  is H, optionally substituted alkyl, optionally substituted alkenyl, optionally substituted acyl, optionally substituted aryl, optionally substituted heterocyclyl, an antioxidant or a targeting moiety;

$R''$  is C<sub>1-6</sub> alkoxy, halo, C<sub>1-6</sub> alkyl, C<sub>2-6</sub> alkenyl or C<sub>1-6</sub> haloalkyl; and

$R^{5b''}$  is H or halo.

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17. The method of Claim 5, wherein the CQ is of the Formula Vb;

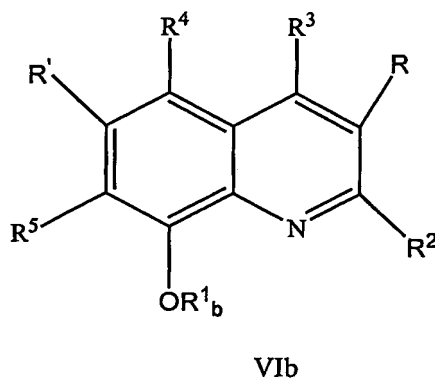


in which

R<sup>1</sup> is H, optionally substituted alkyl, optionally substituted alkenyl, optionally substituted acyl, optionally substituted aryl, optionally substituted heterocyclyl, an antioxidant or a targeting moiety; and

R'' is C<sub>1-6</sub> alkoxy, halo, C<sub>1-6</sub> alkyl, C<sub>2-6</sub> alkenyl or C<sub>1-6</sub> haloalkyl.

18. The method of Claim 5, wherein the CQ is of the Formula VIb;



in which:

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$R^2$  is H; optionally substituted alkyl; optionally substituted alkenyl; optionally substituted aryl; optionally substituted heterocyclyl; optionally substituted alkoxy; an antioxidant; a targeting moiety;  $COR^6$  or  $CSR^6$  in which  $R^6$  is H, optionally substituted alkyl, optionally substituted alkenyl, hydroxy, optionally substituted aryl, optionally substituted heterocyclyl, an antioxidant, a targeting moiety,  $OR^7$ ,  $SR^7$  or  $NR^7R^8$  in which  $R^7$  and  $R^8$  are either the same or different and selected from H, optionally substituted alkyl, optionally substituted alkenyl, optionally substituted aryl or optionally substituted heterocyclyl; CN;  $CH_2NR^9R^{10}$ ,  $HCONR^9$  or  $HCNNR^9R^{10}$  in which  $R^9$  and  $R^{10}$  are either the same or different and selected from H, optionally substituted alkyl, optionally substituted alkenyl, optionally substituted aryl or optionally substituted heterocyclyl;  $OR^{11}$ ,  $SR^{11}$  or  $NR^{11}R^{12}$  in which  $R^{11}$  and  $R^{12}$  are either the same or different and selected from H, optionally substituted alkyl, optionally substituted alkenyl, optionally substituted aryl or optionally substituted heterocyclyl or together form optionally substituted heterocyclyl; or  $SO_2NR^{13}R^{14}$  in which  $R^{13}$  and  $R^{14}$  are either the same or different and selected from H, optionally substituted alkyl, optionally substituted alkenyl, optionally substituted aryl or optionally substituted heterocyclyl; and

$R^3$ ,  $R^4$ ,  $R^5$ , R and R' are either the same or different and selected from H, optionally substituted alkyl, optionally substituted alkenyl optionally substituted alkoxy, optionally substituted acyl, hydroxy, alkylamino, alkylthio, alkylsulphonyl, alkylsulphinyl, halo,  $SO_3H$ , amine, optionally substituted aryl, optionally substituted heterocyclyl, an antioxidant or a targeting moiety, with the proviso that when  $R^1$  to  $R^3$ , R and R' are H, then  $R^4$  is not Cl and  $R^5$  is not I; and

$R^{1b}$  is optionally substituted  $C_{1-6}$  alkyl, optionally substituted aryl, optionally substituted aryl acyl,  $C_{1-6}$  alkyl acyl or optionally substituted heterocyclyl.

19. The method of Claim 2, wherein the neurological disorder is selected from sporadic or familial AD, Parkinson's disease, multiple sclerosis, amyotrophic lateral sclerosis, epilepsy, drug abuse or drug addiction (alcohol, cocaine, heroin, amphetamine or the like), spinal cord disorders and/or injuries, dystrophy or degeneration of the neural retina

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(retinopathies) and peripheral neuropathies, such as diabetic neuropathy and/or the peripheral neuropathies induced by toxins, cardiomyopathy, AIDS dementia and HIV-1 induced neurotoxicity, atherosclerosis, cerebral ischaemia, cerebral palsy, cerebral tumour, chemotherapy-induced organ damage, cisplatin-induced nephrotoxicity, coronary artery bypass surgery, Creutzfeldt-Jacob disease and its new variant associated with "mad cow" disease, Down's syndrome, post-traumatic epilepsy, Friedrich's ataxia, frontotemporal dementia, glaucoma, glomerulopathy, hemochromatosis, hemodialysis, hemolysis, hemolytic uraemic syndrome (Weil's disease), hemorrhagic stroke, Hallerboden-Spatz disease, heart attack and reperfusion injury, Huntington's disease, Lewy body disease, intermittent claudication, ischaemic stroke, inflammatory bowel disease, macular degeneration, malaria, methanol-induced toxicity, meningitis (aseptic and tuberculous), motor neuron disease, multiple system atrophy, myocardial ischaemia, neoplasia, peri-natal asphyxia, Pick's disease, progressive supra-nuclear palsy, radiotherapy-induced organ damage, restenosis after angioplasty, retinopathy, senile dementia, schizophrenia, sepsis, septic shock, spongiform encephalopathies, subharrachnoid hemorrhage/cerebral vasospasm, subdural hematoma, surgical trauma, including neurosurgery, thalassemia, transient ischaemic attack (TIA), traumatic brain injury (TBI), traumatic spinal injury, transplantation, vascular dementia, viral meningitis and viral encephalitis, dementia associated with Down's syndrome, amyotrophic lateral sclerosis, motoneuron disease, cataract, dementia with Lewy body formation, diffuse Lewy body disease, neurological diseases resulting from oxidative stress, such as, neurological disease resulting from diabetes, stroke and cardiovascular disease.

20. The method of Claim 2, wherein said agent is administered in conjunction with one or more pharmaceutically acceptable compounds used for treating a neurological disorders.

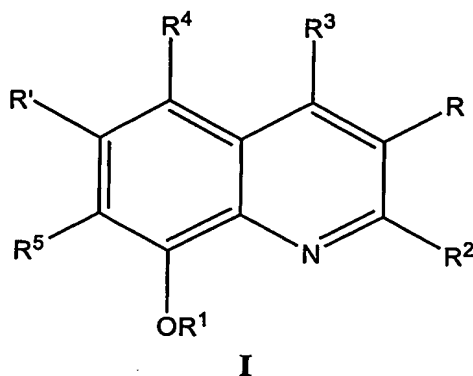
21. The method of Claim 20, wherein said compound is selected from phenserine, galantamine, or tacrine, Vitamin E or Vitamin C, flurbiprofen or ibuprofen, NCX-2216, 17- $\beta$ -oestradiol and vitamin B12.

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22. Use of any one or more of the agents of the Formulas I, Ia, Ib, IIa, IIIa, IVa, Va, VIa, IIb, IIIb, IVb, Vb and VIb in the manufacture of a medicament for the treatment and/or prophylaxis of a condition or disorder associated with or exacerbated by oxidative stress and with symptoms including cognitive impairment or memory loss.
23. A method for the prophylaxis and/or treatment of mild cognitive impairment (MCI) or memory loss due to or exacerbated by oxidative stress in a subject, said method comprising administering to said subject an effective amount of an agent reduces the levels of reactive oxygen species.
24. A method for improving cognitive function or memory in a subject, said method comprising administering to said subject an effective amount of an agent which reduces the levels of reactive oxygen species thereby improving the cognitive function or memory of said subject.
25. The method of Claim 23 or 24, wherein the condition or disorder is a neurological condition or disorder.
26. The method of Claim 25, wherein said agent is a metal binding agent.
27. The method of Claim 26, wherein the agent modulates the level of plasma zinc and/or copper.
28. The method of Claim 26, wherein said metal binding agent is a 8-hydroxyquinolone or clioquinol (CQ) or a derivative, homologue, analogue, chemical equivalent or mimetic thereof.

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29. The method of Claim 28, wherein the CQ is of the Formula I:



in which:

R<sup>1</sup> is H, optionally substituted alkyl, optionally substituted alkenyl, optionally substituted acyl, optionally substituted aryl, optionally substituted heterocyclyl, an antioxidant or a targeting moiety;

R<sup>2</sup> is H; optionally substituted alkyl; optionally substituted alkenyl; optionally substituted aryl; optionally substituted heterocyclyl; optionally substituted alkoxy; an antioxidant; a targeting moiety; COR<sup>6</sup> or CSR<sup>6</sup> in which R<sup>6</sup> is H, optionally substituted alkyl, optionally substituted alkenyl, hydroxy, optionally substituted aryl, optionally substituted heterocyclyl, an antioxidant, a targeting moiety, OR<sup>7</sup>, SR<sup>7</sup> or NR<sup>7</sup>R<sup>8</sup> in which R<sup>7</sup> and R<sup>8</sup> are either the same or different and selected from H, optionally substituted alkyl, optionally substituted alkenyl, optionally substituted aryl or optionally substituted heterocyclyl; CN; CH<sub>2</sub>NR<sup>9</sup>R<sup>10</sup>, HCNOR<sup>9</sup> or HCNNR<sup>9</sup>R<sup>10</sup> in which R<sup>9</sup> and R<sup>10</sup> are either the same or different and selected from H, optionally substituted alkyl, optionally substituted alkenyl, optionally substituted aryl or optionally substituted heterocyclyl; OR<sup>11</sup>, SR<sup>11</sup> or NR<sup>11</sup>R<sup>12</sup> in which R<sup>11</sup> and R<sup>12</sup> are either the same or different and selected from H, optionally substituted alkyl, optionally substituted alkenyl, optionally substituted aryl or optionally substituted heterocyclyl or together form optionally substituted heterocyclyl; or SO<sub>2</sub>NR<sup>13</sup>R<sup>14</sup> in which R<sup>13</sup> and R<sup>14</sup> are either the same or different and selected from H, optionally substituted alkyl, optionally substituted alkenyl, optionally substituted aryl or

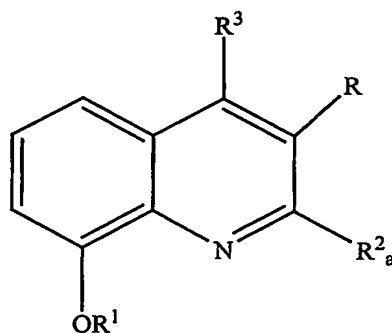
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optionally substituted heterocyclyl; and

$R^3$ ,  $R^4$ ,  $R^5$ ,  $R$  and  $R'$  are either the same or different and selected from H, optionally substituted alkyl, optionally substituted alkenyl optionally substituted alkoxy, optionally substituted acyl, hydroxy, alkylamino, alkylthio, alkylsulphonyl, alkylsulphinyl, halo,  $SO_3H$ , amine, optionally substituted aryl, optionally substituted heterocyclyl, an anti-oxidant or a targeting moiety,

with the proviso that when  $R^1$  to  $R^3$ ,  $R$  and  $R'$  are H, then  $R^4$  is not Cl and  $R^5$  is not I.

30. The method of Claim 28, wherein the CQ is of the Formula Ia:



in which:

$R^1$  is H, optionally substituted alkyl, optionally substituted alkenyl, optionally substituted acyl, optionally substituted aryl, optionally substituted heterocyclyl, an antioxidant or a targeting moiety;

$R^3$  and  $R$  are either the same or different and selected from H, optionally substituted alkyl, optionally substituted alkenyl optionally substituted alkoxy, optionally substituted acyl, hydroxy, alkylamino, alkylthio, alkylsulphonyl, alkylsulphinyl, halo,  $SO_3H$ , amine, optionally substituted aryl, optionally substituted heterocyclyl, an anti-

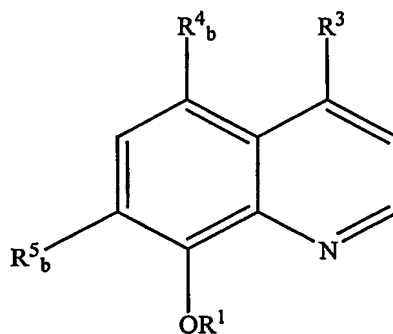


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oxidant or a targeting moiety; and

$R^2a$  is H; optionally substituted  $C_{1-6}$  alkyl; optionally substituted  $C_{1-6}$  alkenyl; optionally substituted aryl; optionally substituted heterocyclyl; an antioxidant; a targeting moiety;  $COR^6a$  or  $CSR^6a$  in which  $R^6a$  is H, optionally substituted  $C_{1-6}$  alkyl, optionally substituted  $C_{2-6}$  alkenyl, hydroxy, optionally substituted aryl, optionally substituted heterocyclyl or  $OR^7a$ ,  $SR^7a$  or  $NR^7aR^8a$  in which  $R^7a$  and  $R^8a$  are either the same or different and selected from H, optionally substituted  $C_{1-6}$  alkyl, optionally substituted  $C_{2-6}$  alkenyl, optionally substituted aryl or optionally substituted heterocyclyl; CN;  $CH_2NR^9aR^{10a}$ ,  $HCNOR^9a$  or  $HCNNR^9aR^{10}$  in which  $R^9a$  and  $R^{10a}$  are either the same or different and selected from H, optionally substituted  $C_{1-6}$  alkyl, optionally substituted  $C_{2-6}$  alkenyl, optionally substituted aryl or optionally substituted heterocyclyl;  $OR^{11a}$ ,  $SR^{11a}$  or  $NR^{11a}R^{12a}$  in which  $R^{11a}$  and  $R^{12a}$  are either the same or different and selected from H, optionally substituted  $C_{1-6}$  alkyl, optionally substituted  $C_{2-6}$  alkenyl, optionally substituted aryl or optionally substituted heterocyclyl or together form optionally substituted heterocyclyl; or  $SO_2NR^{13a}R^{14a}$  in which  $R^{13a}$  and  $R^{14a}$  are either the same or different and selected from H or optionally substituted  $C_{1-6}$  alkyl, optionally substituted  $C_{2-6}$  alkenyl, optionally substituted aryl or optionally substituted heterocyclyl.

31. The method of Claim 28, wherein the CQ is of the Formula Ib:



Ib

in which:

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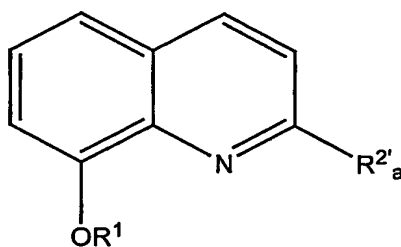
$R^1$  is H, optionally substituted alkyl, optionally substituted alkenyl, optionally substituted acyl, optionally substituted aryl, optionally substituted heterocyclyl, an antioxidant or a targeting moiety;

$R^3$  is either the same or different and selected from H, optionally substituted alkyl, optionally substituted alkenyl optionally substituted alkoxy, optionally substituted acyl, hydroxy, alkylamino, alkylthio, alkylsulphonyl, alkylsulphinyl, halo,  $SO_3H$ , amine, optionally substituted aryl, optionally substituted heterocyclyl, an anti-oxidant or a targeting moiety; and

$R^{4b}$  and  $R^{5b}$  are either the same or different and selected from H; optionally substituted  $C_{1-6}$  alkyl; optionally substituted  $C^{2-6}$  alkenyl; halo; an anti-oxidant; a targeting moiety,  $SO_3H$ ;  $SO_2NR^{13a}R^{14a}$  in which  $R^{13a}$  and  $R^{14a}$  are as defined in Formula Ia above; or  $OR^{15b}$ ,  $SR^{15b}$  or  $NR^{15b}R^{16b}$  in which  $R^{15b}$  and  $R^{16b}$  are either the same or different and selected from H, optionally substituted  $C_{1-6}$  alkyl, optionally substituted  $C_{2-6}$  alkenyl, optionally substituted  $C_{1-6}$  acyl, optionally substituted aryl or optionally substituted heterocyclyl,

with the proviso that when  $R^1$  and  $R^3$  are H, then  $R^{4b}$  is not Cl and  $R^{5b}$  is not I.

32. The method of Claim 30, wherein the Ia is of the Formula of IIa:



IIa

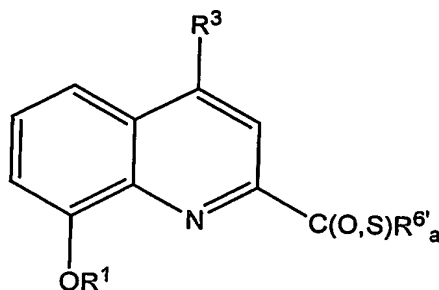
in which:

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$R^1$  is H, optionally substituted alkyl, optionally substituted alkenyl, optionally substituted acyl, optionally substituted aryl, optionally substituted heterocyclyl, an antioxidant or a targeting moiety; and

$R^{2'a}$  is optionally substituted  $C_{1-6}$  alkyl, optionally substituted  $C_{2-6}$  alkenyl, optionally substituted aryl or optionally substituted heterocyclyl.

33. The method of Claim 30, wherein the Ia is of the Formula of IIIa:



IIIa

in which:

$R^1$  is H, optionally substituted alkyl, optionally substituted alkenyl, optionally substituted acyl, optionally substituted aryl, optionally substituted heterocyclyl, an antioxidant or a targeting moiety;

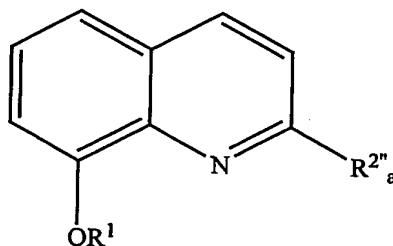
$R^3$  is either the same or different and selected from H, optionally substituted alkyl, optionally substituted alkenyl optionally substituted alkoxy, optionally substituted acyl, hydroxy, alkylamino, alkylthio, alkylsulphonyl, alkylsulphinyl, halo,  $SO_3H$ , amine, optionally substituted aryl, optionally substituted heterocyclyl, an anti-oxidant or a targeting moiety; and

$R^{6'a}$  is optionally substituted  $C_{1-6}$  alkyl, optionally substituted  $C_{2-6}$  alkenyl, hydroxy,  $OR^{7'a}$ ,  $SR^{7'a}$ ,  $N_2R^{7'a}R^{8'a}$  or  $NR^{7'a}R^{8'a}$  in which  $R^{7'a}$  and  $R^{8'a}$  are either the same or different and selected from H, optionally substituted  $C_{1-6}$  alkyl, optionally substituted

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aryl or optionally substituted heterocyclyl.

34. The method of Claim 28, wherein the CQ is of the Formula IVa;



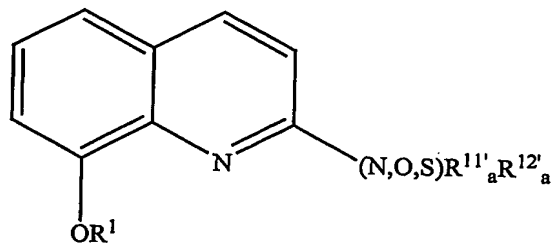
IVa

in which:

R¹ is H, optionally substituted alkyl, optionally substituted alkenyl, optionally substituted acyl, optionally substituted aryl, optionally substituted heterocyclyl, an antioxidant or a targeting moiety; and

R²ᵃ is CN; CH₂NR⁹ᵃR¹⁰ᵃ, HCNOR⁹ᵃ or HCNNR⁹ᵃR¹⁰ᵃ in which R⁹ᵃ and R¹⁰ᵃ are either the same or different and selected from H, optionally substituted C₁-₆ alkyl, optionally substituted alkenyl, optionally substituted aryl or optionally substituted heterocyclyl.

35. The method of Claim 28, wherein the CQ is of the Formula Va;



Va

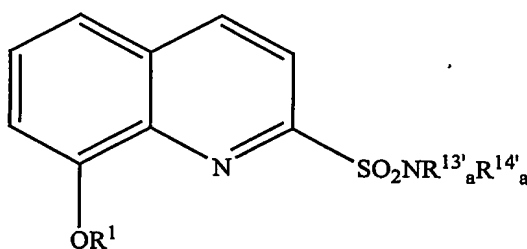
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in which:

$R^1$  is H, optionally substituted alkyl, optionally substituted alkenyl, optionally substituted acyl, optionally substituted aryl, optionally substituted heterocyclyl, an antioxidant or a targeting moiety; and

$R^{11a'}$  and  $R^{12a'}$  are either the same or different and selected from H, optionally substituted  $C_{1-6}$  alkyl, optionally substituted  $C_{2-6}$  alkenyl, optionally substituted aryl and optionally substituted heterocyclyl or together form optionally substituted heterocyclyl.

36. The method of Claim 28, wherein the CQ is of the Formula VIa;



VIa

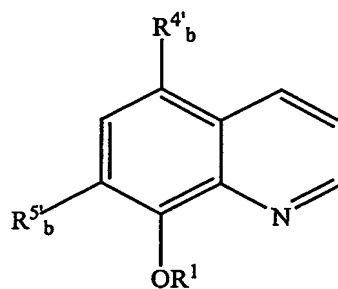
in which:

$R^1$  is H, optionally substituted alkyl, optionally substituted alkenyl, optionally substituted acyl, optionally substituted aryl, optionally substituted heterocyclyl, an antioxidant or a targeting moiety; and

$R^{13a'}$  and  $R^{14a'}$  are either the same or different and selected from H, optionally substituted  $C_{1-6}$  alkyl, optionally substituted  $C_{2-6}$  alkenyl, optionally substituted aryl or optionally substituted heterocyclyl.

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37. The method of Claim 31, wherein the Ib is of the Formula of IIb;



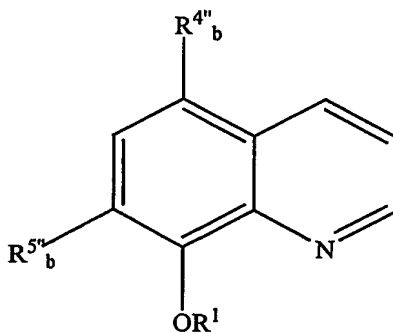
IIb

in which:

$R^1$  is H, optionally substituted alkyl, optionally substituted alkenyl, optionally substituted acyl, optionally substituted aryl, optionally substituted heterocyclyl, an antioxidant or a targeting moiety; and

$R^{4'b'}$  and  $R^{5'a'}$  are either the same or different and selected from halo,  $C_{1-6}$  alkyl,  $C_{2-6}$  alkenyl, amine,  $SO_3H$ , optionally substituted aryl or optionally substituted heterocyclyl.

38. The method of Claim 31, wherein the Ib is of the Formula of IIIb;



IIIb

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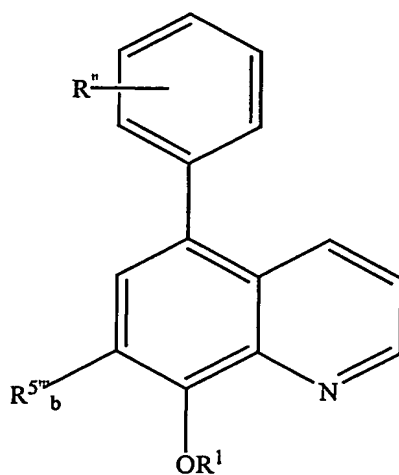
in which

$R^1$  is H, optionally substituted alkyl, optionally substituted alkenyl, optionally substituted acyl, optionally substituted aryl, optionally substituted heterocyclyl, an antioxidant or a targeting moiety;

$R^{4b''}$  is H or halo; and

$R^{5b''}$  is optionally substituted aryl or optionally substituted heterocyclyl.

39. The method of Claim 28, wherein the CQ is of the Formula IVb;



IVb

in which:

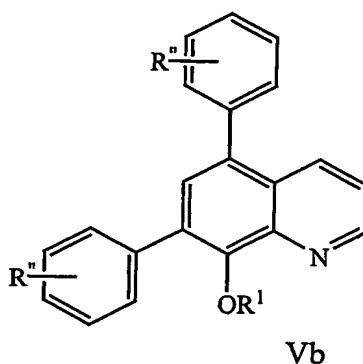
$R^1$  is H, optionally substituted alkyl, optionally substituted alkenyl, optionally substituted acyl, optionally substituted aryl, optionally substituted heterocyclyl, an antioxidant or a targeting moiety;

$R''$  is C<sub>1-6</sub> alkoxy, halo, C<sub>1-6</sub> alkyl, C<sub>2-6</sub> alkenyl or C<sub>1-6</sub> haloalkyl; and

$R^{5b''}$  is H or halo.

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40. The method of Claim 28, wherein the CQ is of the Formula Vb;

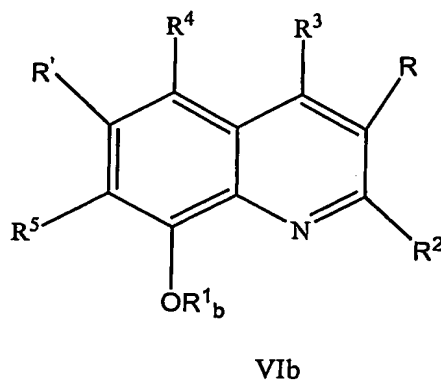


in which

R<sup>1</sup> is H, optionally substituted alkyl, optionally substituted alkenyl, optionally substituted acyl, optionally substituted aryl, optionally substituted heterocyclyl, an antioxidant or a targeting moiety; and

R'' is C<sub>1-6</sub> alkoxy, halo, C<sub>1-6</sub> alkyl, C<sub>2-6</sub> alkenyl or C<sub>1-6</sub> haloalkyl.

41. The method of Claim 28, wherein the CQ is of the Formula VIb;



in which:



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$R^2$  is H; optionally substituted alkyl; optionally substituted alkenyl; optionally substituted aryl; optionally substituted heterocyclyl; optionally substituted alkoxy; an antioxidant; a targeting moiety;  $COR^6$  or  $CSR^6$  in which  $R^6$  is H, optionally substituted alkyl, optionally substituted alkenyl, hydroxy, optionally substituted aryl, optionally substituted heterocyclyl, an antioxidant, a targeting moiety,  $OR^7$ ,  $SR^7$  or  $NR^7R^8$  in which  $R^7$  and  $R^8$  are either the same or different and selected from H, optionally substituted alkyl, optionally substituted alkenyl, optionally substituted aryl or optionally substituted heterocyclyl;  $CN$ ;  $CH_2NR^9R^{10}$ ,  $HCNOR^9$  or  $HCNNR^9R^{10}$  in which  $R^9$  and  $R^{10}$  are either the same or different and selected from H, optionally substituted alkyl, optionally substituted alkenyl, optionally substituted aryl or optionally substituted heterocyclyl;  $OR^{11}$ ,  $SR^{11}$  or  $NR^{11}R^{12}$  in which  $R^{11}$  and  $R^{12}$  are either the same or different and selected from H, optionally substituted alkyl, optionally substituted alkenyl, optionally substituted aryl or optionally substituted heterocyclyl or together form optionally substituted heterocyclyl; or  $SO_2NR^{13}R^{14}$  in which  $R^{13}$  and  $R^{14}$  are either the same or different and selected from H, optionally substituted alkyl, optionally substituted alkenyl, optionally substituted aryl or optionally substituted heterocyclyl; and

$R^3$ ,  $R^4$ ,  $R^5$ ,  $R$  and  $R'$  are either the same or different and selected from H, optionally substituted alkyl, optionally substituted alkenyl optionally substituted alkoxy, optionally substituted acyl, hydroxy, alkylamino, alkylthio, alkylsulphonyl, alkylsulphinyl, halo,  $SO_3H$ , amine, optionally substituted aryl, optionally substituted heterocyclyl, an antioxidant or a targeting moiety, with the proviso that when  $R^1$  to  $R^3$ ,  $R$  and  $R'$  are H, then  $R^4$  is not Cl and  $R^5$  is not I; and

$R^{1b''}$  is optionally substituted  $C_{1-6}$  alkyl, optionally substituted aryl, optionally substituted aryl acyl,  $C_{1-6}$  alkyl acyl or optionally substituted heterocyclyl.

42. The method of Claim 25, wherein the neurological disorder is selected from sporadic or familial AD, Parkinson's disease, multiple sclerosis, amyotrophic lateral sclerosis, epilepsy, drug abuse or drug addiction (alcohol, cocaine, heroin, amphetamine or the like), spinal cord disorders and/or injuries, dystrophy or degeneration of the neural

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retina (retinopathies) and peripheral neuropathies, such as diabetic neuropathy and/or the peripheral neuropathies induced by toxins, cardiomyopathy, AIDS dementia and HIV-1 induced neurotoxicity, atherosclerosis, cerebral ischaemia, cerebral palsy, cerebral tumour, chemotherapy-induced organ damage, cisplatin-induced nephrotoxicity, coronary artery bypass surgery, Creutzfeldt-Jacob disease and its new variant associated with "mad cow" disease, Down's syndrome, post-traumatic epilepsy, Friedrich's ataxia, frontotemporal dementia, glaucoma, glomerulopathy, hemochromatosis, hemodialysis, hemolysis, hemolytic uraemic syndrome (Weil's disease), hemorrhagic stroke, Hallerboden-Spatz disease, heart attack and reperfusion injury, Huntington's disease, Lewy body disease, intermittent claudication, ischaemic stroke, inflammatory bowel disease, macular degeneration, malaria, methanol-induced toxicity, meningitis (aseptic and tuberculous), motor neuron disease, multiple system atrophy, myocardial ischaemia, neoplasia, peri-natal asphyxia, Pick's disease, progressive supra-nuclear palsy, radiotherapy-induced organ damage, restenosis after angioplasty, retinopathy, senile dementia, schizophrenia, sepsis, septic shock, spongiform encephalopathies, subharrachnoid hemorrhage/cerebral vasospasm, subdural hematoma, surgical trauma, including neurosurgery, thalassemia, transient ischaemic attack (TIA), traumatic brain injury (TBI), traumatic spinal injury, transplantation, vascular dementia, viral meningitis and viral encephalitis, dementia associated with Down's syndrome, amyotrophic lateral sclerosis, motorneuron disease, cataract, dementia with Lewy body formation, diffuse Lewy body disease, neurological diseases resulting from oxidative stress, such as, neurological disease resulting from diabetes, stroke and cardiovascular disease.

43. The method of any of any of Claims 25 or 26 or 27 wherein said agent is administered in conjunction with one or more pharmaceutically acceptable compounds used for treating a neurological disorders.

44. The method of Claim 43, wherein said compound is selected from phenserine, galantamine, or tacrine, Vitamin E or Vitamin C, flurbiprofen or ibuprofen, NCX-2216, 17- $\beta$ -oestradiol and vitamin B12.

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45. Use of any one or more of the agents of the Formulas I, Ia, Ib, IIa, IIIa, IVa, Va, VIa, IIb, IIIb, IVb, Vb and VIb in the manufacture of a medicament for the treatment and/or prophylaxis of a condition or disorder associated with or exacerbated by oxidative stress and with symptoms including cognitive impairment or memory loss.